

What is claimed is:

1. A joint construction for cable piping provided with an inner cylinder having an inner cylinder main body of thin-wall pipe and an outer cylinder fitted to the inner cylinder as to freely slide and having an outer cylinder main body of thin-wall pipe to connect a first pipe for cable and a second pipe for cable as to expand and contract in length comprising a construction in which:

a holding ring of a first seal member tightly fit to a peripheral face of an end portion of the first pipe, a first stop ring of plate hitching to the peripheral face of the first pipe, and an opening end forming member are unitedly attached to an end of the inner cylinder by plastic working on the inner cylinder main body;

a holding groove of a second seal member tightly fit to a peripheral face of an end portion of the second pipe is formed to be curved by plastic working on another end of the inner cylinder main body; and

a second stop ring hitching to a peripheral face of the second pipe and an opening end forming member are unitedly attached to an outer end of the outer cylinder by plastic working on an outer end of the outer cylinder main body.

2. A joint construction for cable piping provided with an inner cylinder having an inner cylinder main body of thin-wall pipe and an

outer cylinder fitted to the inner cylinder as to freely slide and having an outer cylinder main body of thin-wall pipe to connect a first pipe for cable and a second pipe for cable as to expand and contract in length comprising a construction in which:

an outer brim portion, at right angles with an axis, formed on a holding ring tightly fit to a peripheral face of an end portion of the first pipe, an outer brim portion, at right angles with an axis, formed on a first stop ring of plate hitching on the peripheral face of the first pipe, and an outer brim portion, at right angles with an axis, formed on an opening end forming member are unitedly fitted to a peripheral groove portion, of which cross section is U-shaped opening inward, formed on an end of the inner cylinder main body by plastic working;

the holding ring, the first stop ring, and the opening end forming member are unitedly attached to an end of the inner cylinder;

a holding groove of a second seal member tightly fit to a peripheral face of an end portion of the second pipe is formed to be curved and opening inward by plastic working on another end of the inner cylinder main body;

an outer brim portion, at right angles with the axis, formed on a second stop ring of plate hitching on a peripheral face of the second pipe, and an outer brim portion, at right angles with the axis, formed on an opening end forming member are unitedly fitted to a peripheral

groove portion, of which cross section is U-shaped opening inward, formed on an outer end of the outer cylinder main body by plastic working;

the second stop ring and the opening end forming member are unitedly attached to an outer end of the outer cylinder; and

a holding portion to hold the first seal member is formed as an inward-opening concave groove composed of an inner brim portion formed on the holding ring, a holding staged portion formed on the inner cylinder main body, and a part of an inner peripheral face of the inner cylinder main body.

3. The joint construction for cable piping as set forth in claim 1 or claim 2, wherein the outer cylinder main body has a stopping protrusion, which can contact another end of the inner cylinder, on the outer end side not to let the end contact the second stop ring.

4. The joint construction for cable piping as set forth in claim 1 or claim 2, wherein the opening end forming member has an outer brim portion fitted by the plastic working and a tapered short cylinder portion increasing in diameter toward an outer side in the axis direction, and the opening end forming member has an outer brim portion fitted by the plastic working and a tapered short cylinder portion increasing in diameter toward an outer side in the axis direction,

5. The joint construction for cable piping as set forth in claim 1 or claim 2, wherein each of the first seal member and the second seal

member has two rows of sealing tongue portions protruding inward.

6. The joint construction for cable piping as set forth in claim 1 or claim 2, wherein each of hitching blades, disposed on inner sides of the first stop ring and the second stop ring, has a small convex portion for reinforcement.

7. A joint construction for cable piping provided with an inner cylinder having an inner cylinder main body of thin-wall pipe, a first outer cylinder fitted to the inner cylinder as to freely slide and having a first outer cylinder main body, and a second outer cylinder fitted to the inner cylinder as to freely slide and having a second outer cylinder main body of thin-wall pipe to connect a first pipe for cable and a second pipe for cable as to expand and contract in length comprising a construction in which:

a holding groove of a first seal member tightly fit to a peripheral face of an end portion of the first pipe is formed as to be curved on an end of the inner cylinder by plastic working on an end side of the inner cylinder main body;

a holding groove of a second seal member tightly fit to a peripheral face of an end portion of the second pipe is formed as to be curved on another end of the inner cylinder by plastic working on another end side of the inner cylinder main body;

a first stop ring hitching to the peripheral face of the first pipe and an opening end forming member are unitedly attached to an outer end

of the first outer cylinder by plastic working on an outer end of the first outer cylinder main body; and

a second stop ring hitching to the peripheral face of the second pipe and an opening end forming member are unitedly attached to an outer end of the second outer cylinder by plastic working on an outer end of the second outer cylinder main body.

8. A joint construction for cable piping provided with an inner cylinder having an inner cylinder main body of thin-wall pipe, a first outer cylinder fitted to the inner cylinder as to freely slide and having a first outer cylinder main body, and a second outer cylinder fitted to the inner cylinder as to freely slide and having a second outer cylinder main body of thin-wall pipe to connect a first pipe for cable and a second pipe for cable as to expand and contract in length comprising a construction in which:

a holding groove of a first seal member tightly fit to a peripheral face of an end portion of the first pipe is formed as to be curved and opening to an inside diameter direction by plastic working on an end side of the inner cylinder main body;

a holding groove of a second seal member tightly fit to a peripheral face of an end portion of the second pipe is formed as to be curved and opening to the inside diameter direction by plastic working on another end side of the inner cylinder main body;

an outer brim portion at right angles with an axis formed on a

first stop ring hitching to the peripheral face of the first pipe and an outer brim portion at right angles with the axis formed on an opening end forming member are unitedly fitted by plastic working to a peripheral groove portion, of which cross section is U-shaped opening to the inside diameter direction, formed on an outer end side of the first outer cylinder main body;

the first stop ring and the opening end forming member are unitedly attached to an outer end of the first outer cylinder;

an outer brim portion at right angles with the axis formed on a second stop ring hitching to the peripheral face of the second pipe and an outer brim portion at right angles with the axis formed on an opening end forming member are unitedly fitted by plastic working to a peripheral groove portion, of which cross section is U-shaped opening to the inside diameter direction, formed on an outer end side of the second outer cylinder main body; and

the second stop ring and the opening end forming member are unitedly attached to an outer end of the second outer cylinder.

9. The joint construction for cable piping as set forth in claim 7 or claim 8, wherein the first outer cylinder main body has a stopping protrusion, which can contact an end of the inner cylinder, on the outer end side not to let the end of the inner cylinder contact the first stop ring, and, the second outer cylinder main body has a stopping protrusion, which can contact another end of the inner cylinder, on the

outer end side not to let the end of the inner cylinder contact the second stop ring.

10. The joint construction for cable piping as set forth in claim 7 or claim 8, wherein the opening end forming member has an outer brim portion fitted by the plastic working and a tapered short cylinder portion increasing in diameter toward an outer side in the axis direction, and the opening end forming member has an outer brim portion fitted by the plastic working and a tapered short cylinder portion increasing in diameter toward an outer side in the axis direction,

11. The joint construction for cable piping as set forth in claim 7 or claim 8, wherein each of the first seal member and the second seal member has two rows of sealing tongue portions protruding inward.

12. The joint construction for cable piping as set forth in claim 7 or claim 8, wherein each of hitching blades, disposed on inner sides of the first stop ring and the second stop ring, has a small convex portion for reinforcement.